

*Subclass* means a classification of heavy-duty engines of heavy-duty vehicles based on such factors as gross vehicle weight rating, fuel usage (gasoline-, diesel-, and methanol-fueled), vehicle usage, engine horsepower or additional criteria that the Administrator shall apply. Subclasses include, but are not limited to:

- (i) Light-duty gasoline-fueled Otto cycle trucks (6,001-8,500 lb. GVW)
- (ii) Light-duty methanol-fueled Otto cycle trucks (6,001-8,500 lb. GVW)
- (iii) Light-duty petroleum-fueled diesel trucks (6,001-8,500 lb. GVW)
- (iv) Light-duty methanol-fueled diesel trucks (6,001-8,500 lb. GVW)
- (v) Light heavy-duty gasoline-fueled Otto cycle engines (for use in vehicles of 8,501-14,000 lb. GVW)
- (vi) Light heavy-duty methanol-fueled Otto cycle engines (for use in vehicles of 8,501-14,000 lb. GVW)
- (vii) Heavy heavy-duty gasoline-fueled Otto cycle engines (for use in vehicles of 14,001 lb and above GVW)
- (viii) Heavy heavy-duty methanol-fueled Otto cycle engines (for use in vehicles of 14,001 lb. and above GVW)
- (ix) Light heavy-duty petroleum-fueled diesel engines (see § 86.085-2(a)(1))
- (x) Light heavy-duty methanol-fueled diesel engines (see § 86.085-2(a)(1))
- (xi) Medium heavy-duty petroleum-fueled diesel engines (see § 86.085-2(a)(2))
- (xii) Medium heavy-duty methanol-fueled diesel engines (see § 86.085-2(a)(2))
- (xiii) Heavy heavy-duty petroleum-fueled diesel engines (see § 86.085-2(a)(3))
- (xiv) Heavy heavy-duty methanol-fueled diesel engines (see § 86.085-2(a)(3))
- (xv) Petroleum-fueled Urban Bus engines (see § 86.091-2)
- (xvi) Methanol-fueled Urban Bus engines (see § 86.091-2).

For NCP purposes, all optionally certified engines and/or vehicles (engines certified in accordance with § 86.087-10(a)(3) and vehicles certified in accordance with § 86.085-1(b)) shall be considered part of, and included in the FRAC calculation of, the subclass for which they are optionally certified.

*Test Sample* means a group of heavy-duty engines or heavy-duty vehicles of the same configuration which have been selected for emission testing.

*Upper limit* means the emission level for a specific pollutant above which a certificate of conformity may not be issued or may be suspended or revoked.

[50 FR 35388, Aug. 30, 1985, as amended at 55 FR 46628, Nov. 5, 1990]

**§ 86.1103-87 Criteria for availability of nonconformance penalties.**

(a) EPA shall establish for each subclass of heavy-duty engines and heavy-duty vehicles (other than motorcycles), an NCP for a motor vehicle pollutant, when any new or revised emission standard is more stringent than the previous standard for the pollutant, or when an existing standard for that pollutant becomes more difficult to achieve because of a new or revised standard, provided that EPA finds:

- (1) That for such subclass of engines or vehicles, substantial work is required to meet the standard for which the NCP is offered, and
- (2) That there is likely to be a technological laggard.

(b) Substantial work, as used in paragraph (a)(1) of this section, means the application of technology that was not generally used in an engine or vehicle class or subclass to meet standards prior to the implementation of the new or revised standard, or the significant modification of existing technology or design parameters, needed to bring the vehicle or engine into compliance with either the more stringent new or revised standard or an existing standard which becomes more difficult to achieve because of a new or revised standard. Substantial work is determined by the total amount of work required to meet the standard for which the NCP is offered, compared to the previous standard, irrespective of when EPA establishes the NCP.

[77 FR 54401, Sept. 5, 2012]

**§ 86.1104-91 Determination of upper limits.**

EPA shall set a separate upper limit for each phase of NCPs and for each service class.

(a) Except as provided in paragraphs (b), (c), and (d) of this section, the upper limit shall be set as follows:

(1) The upper limit applicable to a pollutant emission standard for a subclass of heavy-duty engines or heavy-duty vehicles for which an NCP is established in accordance with § 86.1103–87, shall be the previous pollutant emission standard for that subclass.

(2) If a manufacturer participates in any of the emissions averaging, trading, or banking programs, and carries over certification of an engine family from the prior model year, the upper limit for that engine family shall be the family emission limit of the prior model year, unless the family emission limit is less than the upper limit determined in paragraph (a) of this section.

(b) If no previous standard existed for the pollutant under paragraph (a) of this section, the upper limit will be developed by EPA during rulemaking.

(c) EPA may set the upper limit during rulemaking at a level below the level specified in paragraph (a) of this section if we determine that a lower level is achievable by all engines or vehicles in that subclass.

(d) EPA may set the upper limit at a level above the level specified in paragraph (a) of this section if we determine that the such level will not be achievable by all engines or vehicles in that subclass.

[77 FR 54401, Sept. 5, 2012]

**§ 86.1105–87 Emission standards for which nonconformance penalties are available.**

(a)–(b) [Reserved]

(c) Effective in the 1991 model year, NCPs will be available for the following additional emission standards:

(1) [Reserved]

(2) Petroleum-fueled diesel heavy-duty engine oxides of nitrogen standard of 5.0 grams per brake horsepower-hour.

(i) For petroleum-fueled light heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with § 86.1113–87(a):

(1)  $COC_{50}$ : \$830.

(2)  $COC_{90}$ : \$946.

(3)  $MC_{50}$ : \$1,167 per gram per brake horsepower-hour.

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with § 86.1113–87(h): 0.12.

(ii) For petroleum-fueled medium heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with § 86.1113–87(a):

(1)  $COC_{50}$ : \$905.

(2)  $COC_{90}$ : \$1,453.

(3)  $MC_{50}$ : \$1,417 per gram per brake horsepower-hour.

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with § 86.1113–87(h): 0.11.

(iii) For petroleum-fueled heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with § 86.1113–87(a):

(1)  $COC_{50}$ : \$930.

(2)  $COC_{90}$ : \$1,590.

(3)  $MC_{50}$ : \$2,250 per gram per brake horsepower-hour.

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with § 86.1113–87(h): 0.11.

(3) Petroleum-fueled diesel light-duty trucks (between 6,001 and 14,000 lbs GVW) particulate matter emission standard of 0.13 grams per vehicle mile.

(i) The following values shall be used to calculate an NCP in accordance with § 86.1113–87(a):

(A)  $COC_{50}$ : \$711.

(B)  $COC_{90}$ : \$1,396.

(C)  $MC_{50}$ : \$2,960 per gram per brake horsepower-hour.

(D) F: 1.2.

(ii) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with § 86.1113–87(h): 0.01.

(d) Effective in the 1993 model year, NCPs will be available for the following additional emission standard:

(1) Petroleum-fueled diesel bus engine (as defined in § 86.093–2) particulate emission standard of 0.10 grams per brake horsepower-hour.

(i) The following values shall be used to calculate an NCP for the standard